THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED SHT 3 - DIMENSIONAL VIEW OF PRIMARY SHELL ADDED SECTION E-E TO SHT 2, CHANGED STA. 106.0 TO 116.0, AND REVISED NOTE 3. ADDED NOTES 16, 17, 18, 19.	09-01-92	D. MARWILL
B	ADDED DETAIL F TO SHT 3 ADDED HOOK STRIPS TO TANK SHELL ON SHT 3.	12-10-92	D. MARWILL
C	CHANGE NOTE 3 FROM 1622-3 CONSTRUCTION TO E-1699-1 CONSTRUCTION. ADD ADDITIONAL LAYER OF PS417 MATERIAL AS SHOWN ON SHT 2 OF 3 SECTION E-E.	07-02-93	
D	INCORPORATED E.O.' D-1 & D-2.	12-13-95	D. MARWILL
E	ADDED -003/-004 FUEL CELLS AND ENGINEERED FABRICS, INC. (EFI) FLANGES TO L/M; ADDED EFI AS ADDITIONAL APPROVED VENDOR FOR EXISTING -001/-002 FUEL CELLS & -003/-004 FUEL CELLS; ADDED EFI SPEC. TO NOTE 3; DELETED REF. TO "NEWLY PROPOSED FAA REGULATION" FROM NOTE 6; ADDED EFI FLANGE P/N(S) TO NOTES 16 & 17; DELTED PRIMARY SHELLS & SECTIONS A THRU D FROM SHT 3; ADDED EFI FUEL CELLS TO SHT 3; ADDED EFI DATA TO SECTIONS E-E & F-F; REVISED NOTE 7.	04-06-01	D. MARWILL
F	INCORPORATED ECN 03713.	11-27-12	P. BRAVO

19. OBTAIN CONTOURS FROM PRIMARY SHELL P/N 41228-202-080-001/-002.

18. LOCATION OF IDENTIFICATION STENCIL.

(E) 17. LOCATION OF FLANGE P/N 61427-1 (AMFUEL -001/-002 CELLS).
LOCATION OF FLANGE P/N 320-4-50997-101 (ENGINEERED FABRICS, INC. -001/-002 CELLS).
LOCATION OF FLANGE P/N 320-4-51547-101 (ENGINEERED FABRICS, INC. -003/-004 CELLS).

(E) 16. LOCATION OF FLANGE P/N 60283-1 (AMFUEL -001/-002 CELLS).
LOCATION OF FLANGE P/N 320-4-50994-101 (ENGINEERED FABRICS, INC. -001/-002/-003/-004 CELLS).

15. THE WEIGHT OF PRODUCTION TANKS SHALL BE WITHIN 5 PERCENT OF THE AVERAGE WEIGHT OF THE FIRST 10 PRODUCTION CELLS.

14. ERA AVIATION AND VENDOR PART NUMBERS SHALL INCLUDE A "DASH No." SUCH THAT ODD NUMBERS ARE LEFT CELLS AND EVEN NUMBERS ARE RIGHT CELLS (i.e., -001 IS A LEFT CELL AND -002 IS A RIGHT CELL).

13. ALL CELLS SHALL BE IDENTIFIED PER TSO-C80, PARAGRAPH 514.86 (b), SUB-PARAGRAPH (1) THROUGH (5).

12. THE CELLS SHALL BE THOROUGHLY CLEANED OF RUBBER PARTICLES, DIRT, SAND, METAL CHIPS OR OTHER FOREIGN MATERIAL BEFORE BEING SHIPPED TO THE BUYER.

11. THE EXTERNAL SURFACES OF THE CELL SHALL BE PROTECTED AGAINST THE EFFECTS OF OZONE AND HYDROCARBON FUELS.

10. FUEL CELLS SHALL HAVE A 10 YEAR MINIMUM LIFE FROM DATE OF MANUFACTURE.

9. SCREW THREADS SHALL BE COATED WITH AN ANTI-SEIZE COMPOUND PER SPECIFICATION TT A 580A OR JAN-A-669.

8. ALL METAL PARTS, SUCH AS NUT-PLATE RINGS, ETC., SHALL BE SUITABLY PROTECTED FROM THE EFFECTS OF CORROSION. ALUMINUM PARTS SHALL BE ANODIZE IN ACCORDANCE WITH MIL-A-8625 OR TREATED IN ACCORDANCE WITH MIL-C-5541.

(E) 7. THE FUEL CELL SHALL BE ABLE TO WITHSTAND A PNEUMATIC PRESSURE OF 3/4 MINIMUM, 1 PSIG MAXIMUM FOR 20 MINUTES WITHOUT LEAKAGE. ACCOMPLISH A LEAK CHECK WITH A SOAPY SOLUTION OR PHENOLPHTHALEIN LEAK TEST.

(E) 6. THE FUEL CELL ASSEMBLY SHALL MEET THE DROP-TEST REQUIREMENTS OF FAR 29.952(a) AND 29.952(b)(3).
DURING THIS TEST, ALL CELL OPENINGS SHALL HAVE APPROPRIATE EQUIPMENT INSTALLED OR BLANKED-OFF AS DEFINED BY THE ERA AVIATION TEST PROPOSAL.

5. FUEL CELL MAXIMUM AMBIENT TEMPERATURE IS -40° F TO +135° F.

4. THE FUEL CELL SHALL MEET THE DESIGN REQUIREMENTS OF FAA TSO-C80, SUBPART B ONLY, EXCEPT AS NOTED:
PARAGRAPH 16.0 "PUNCTURE RESISTANCE" SHALL BE TESTED WITH A MINIMUM FORCE OF 370 POUNDS INSTEAD OF 15 POUNDS (REFERENCE FAR 29.963(b).

(E) 3. THE FUEL CELL SHALL BE OF A NON SELF SEALING FLEXIBLE CELL PER AMFUEL E-1669-1 CONSTRUCTION OR ENGINEERED FABRICS, INC. BTC-114 CONSTRUCTION.

(D) 2. THIS FUEL CELL IS INTENDED FOR USE ON A BELL MODEL 412/212/205 HELICOPTER USING FUELS PER MIL-G-5572, MIL-T-5624, MIL-T-83133 AND COMMERCIAL GRADE FUELS, PER ASTM D 1655. THE CELL SHALL BE UNAFFECTED BY MIL-I-27686 ICING INHIBITOR WHEN PROPERLY MIXED WITH FUEL IN QUANTITIES OF UP TO 0.15% BY VOLUME.

1. THIS DRAWING AND MASTER TOOL PART No. 41202-202-095 COMPLETELY DEFINE ERA AVIATION PART No. 41228-202-095 FUEL CELL ASSEMBLY.

NOTES:

APPROVED VENDOR		
ERA PART NUMBER	VENDOR PART NUMBER	VENDOR & ADDRESS
41228-202-095-001 41228-202-095-002	62525-1 62525-2	AMFUEL MAGNOLIA, ARKANSAS
(E) 41228-202-095-001 41228-202-095-002	320-4-50868-103 320-4-50868-104	ENGINEERED FABRICS, INC. ROCKMART, GEORGIA
(E) 41228-202-095-003 41228-202-095-004	320-4-50868-105 320-4-50868-106	ENGINEERED FABRICS, INC. ROCKMART, GEORGIA

CONTROL COPY
ISSUED DATE
DEC 10 2012

		-004	-003	-002	-001	FIND No.	PART No.	DESCRIPTION	MAT'L	SPEC
		12	12	12	12	10	601.3594	HANGER ASSY		
(E)		1	1			9	320-4-51547-101	FLANGE		
(E)				1	1	8	320-4-50997-101	FLANGE		
(E)		3	3	3	3	7	320-4-50994-101	FLANGE		
				1	1	6	61427-1	FLANGE		
				3	3	5	60283-1	FLANGE		
(E)		/				4	41228-202-095-004	FUEL CELL R/H		
(E)			/			3	41228-202-095-003	FUEL CELL L/H		
				/		2	41228-202-095-002	FUEL CELL R/H		
					/	1	41228-202-095-001	FUEL CELL L/H		

QTY REQ'D — PARTS LIST

NEXT ASSY(S)
41228-200-006
41228-200-005

ORIGINAL DATE (MO-DA-YR) 11-27-12
DRAWN BY T. HARVILLE
CHECKER
DRAWING APPROVAL
CONTRACT No.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .03
3 PLACE DECIMALS ± .010
ANGLES ± .5°

APICAL INDUSTRIES, INC. 2600 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3813 (760) 724-5300

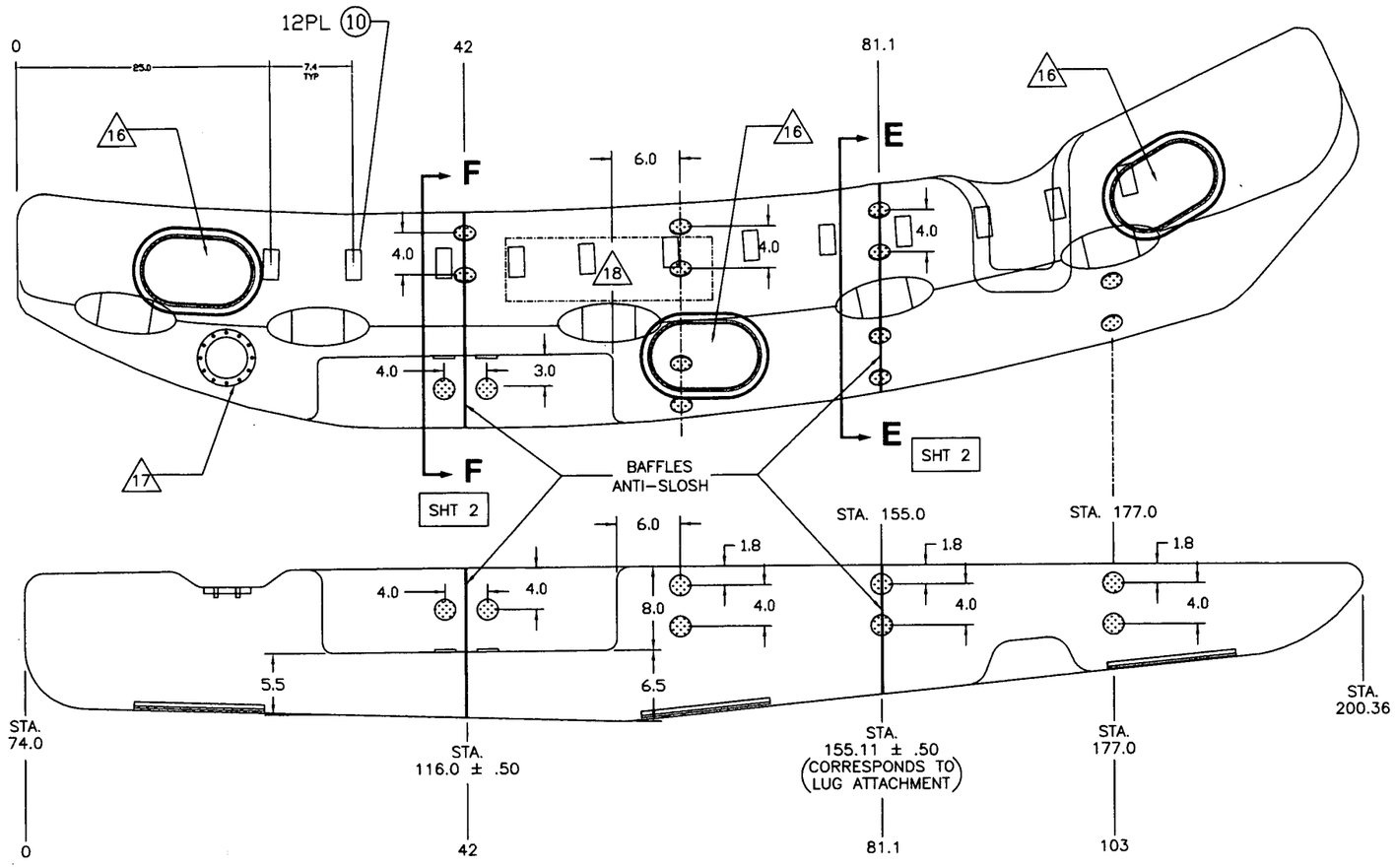
AUX FUEL - FUEL CELL

SIZE	CAGE CODE	DWG. No.	REV
B	07MZ6	41228-202-095	F

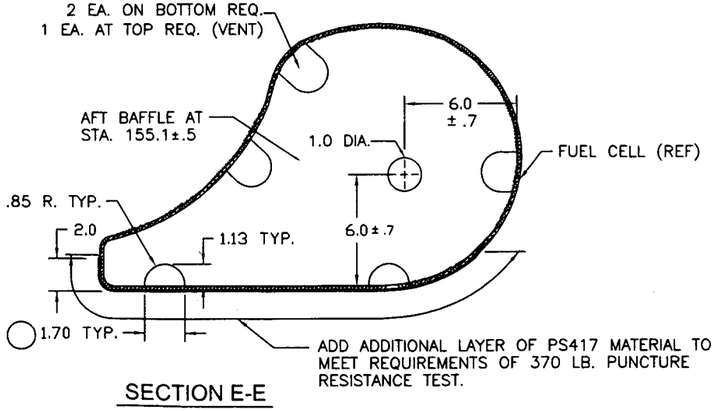
SCALE NONE — SHEET 1 of 3

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

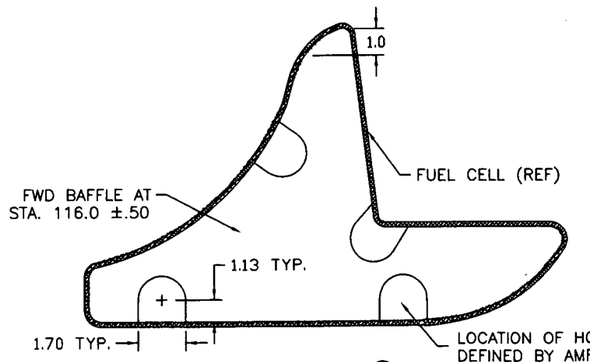
-001 & -003 ENGINEERED FABRIC FUEL CELL L/H (SHOWN)
-002 & -004 ENGINEERED FABRIC FUEL CELL R/H (OPPOSITE) (E)



(D)(E) LOCATION OF HOLE TO BE DEFINED BY AMFUEL DWG OR PATTERN OR ENGINEERED FABRIC DWG OR PATTERN
2 EA. ON BOTTOM REQ.
1 EA. AT TOP REQ. (VENT)



SECTION E-E



SECTION F-F (D)

LOCATION OF HOLE TO BE (E) DEFINED BY AMFUEL DWG OR PATTERN OR ENGINEERED FABRIC DWG OR PATTERN
2 EA. ON BOTTOM REQ.
1 EA. AT TOP REQ. (VENT)

ORIGINAL DATE (MO-DA-YR)	01-26-94
DRAWN BY	T. HARVILLE
CHECKER	
DRAWING APPROVAL	
CONTRACT No.	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .03
3 PLACE DECIMALS ± .010
ANGLES ± .5°

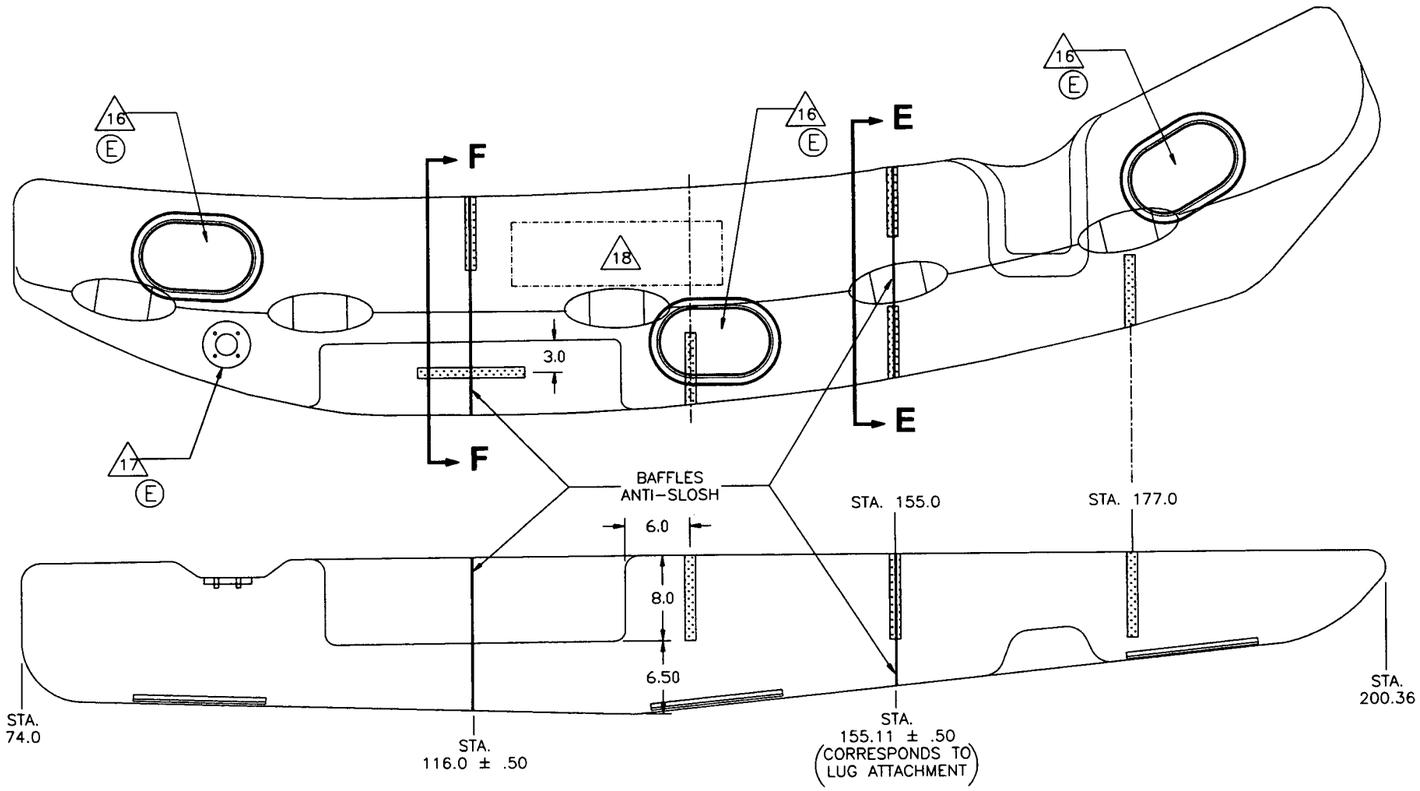
APICAL INDUSTRIES, INC. 2800 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-5300

AUX FUEL – FUEL CELL

SIZE	CAGE CODE	DWG. No.	REV
B	07MZ6	41228-202-095	F

SCALE NONE SHEET 2 of 3

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



-001 AMFUEL FUEL CELL L/H (SHOWN)
-002 AMFUEL FUEL CELL R/H (OPPOSITE)

ORIGINAL DATE (MO-DA-YR)	01-26-94
DRAWN BY	T. HARVILLE
CHECKER	
DRAWING APPROVAL	
CONTRACT No.	

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
2 PLACE DECIMALS ± .03
3 PLACE DECIMALS ± .010
ANGLES ± .5°

APICAL INDUSTRIES, INC. 2605 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 724-3300

AUX FUEL - FUEL CELL

SIZE	CAGE CODE	DWG. No.	REV
B	07MZ6	41228-202-095	F

SCALE NONE SHEET 3 of 3